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[54] **CODING METHOD AND SYSTEM WITH ENHANCED SECURITY**

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[52] **U.S. Cl.** **364/717**; 178/22; 375/1

[58] **Field of Search** 364/717; 325/32; 331/78; 178/22

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[57] **ABSTRACT**

A coding system produces a code with enhanced acquisition security by generating a plurality of linear component codes, C_1, C_2, . . . C_n, combining the component codes in accordance with a modulo-2 addition rule to form a linear first composite code, nonlinearizing the first composite code to form a nonlinear second composite code, time delaying the component codes, C_1, C_2, . . . C_{n-1}, and combining the time delayed codes with the nonlinear second composite code in accordance with a Boolean majority voting rule to form a nonlinear acquisition composite code. Acquisition of the nonlinear acquisition composite code is achieved by generating a plurality of linear reference component codes, R_1, R_2, . . . R_n, that correlate respectively with the linear acquisition component codes, C_1, C_2, . . . C_n, combining the reference component codes in accordance with the modulo-2 addition rule to form a linear third composite code, nonlinearizing the third composite code to form a nonlinear fourth composite code, time delaying the reference component codes, R_1, R_2, . . . R_{n-1}, correlating the time delayed codes with the nonlinear acquisition composite code by shifting the phases of the time delayed codes, and correlating the fourth composite code with the acquisition composite code by shifting the phase of the reference component code, R_n.

12 Claims, 4 Drawing Figures